

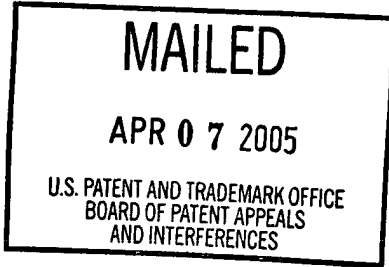
The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte STEPHEN LISCINKSY

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Appeal No. 2005-0233  
Application 10/085,138

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ON BRIEF

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Before KRASS, JERRY SMITH and MacDONALD, Administrative Patent Judges.

JERRY SMITH, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's rejection of claims 1-18, which constitute all the claims in the application.

The disclosed invention pertains to a three phase supervisory circuit for detecting fault conditions in an input AC power signal and a method for detecting fault conditions in an AC power signal.

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Representative claim 1 is reproduced as follows:

1. A three phase supervisory circuit for detecting fault conditions in an input AC power signal, comprising:

a first sensing circuit for detecting a voltage level for a first phase of said AC power signal and comparing said voltage level of said first phase to a threshold value;

a second sensing circuit for detecting a voltage level for a second phase of said AC power signal and comparing said voltage level of said second phase to said threshold value;

a third sensing circuit for detecting a voltage level for a third phase of said AC power signal and comparing said voltage level of said third phase to said threshold value;

a delay circuit for delaying initial operation of said sensing circuits for a predetermined period each time said supervisory circuit is powered on; and

an activation circuit for receiving indication signals from said sensing and delay circuits, said indication signals indicative of whether said predetermined period of time has elapsed and said voltage levels of said phases have met said threshold value.

The examiner relies on the following references:

|                    |           |               |
|--------------------|-----------|---------------|
| Holmquest          | 3,535,591 | Oct. 20, 1970 |
| Tran et al. (Tran) | 5,224,010 | June 29, 1993 |
| Earle              | 5,642,052 | June 24, 1997 |

Claims 1-18 stand rejected under 35 U.S.C. § 103(a). As evidence of obviousness the examiner offers Holmquest in view of Tran with respect to claims 1-7 and 11-18, and Earle is added to this combination with respect to claims 8-10.

Rather than repeat the arguments of appellant or the examiner, we make reference to the briefs and the answer for the respective details thereof.

OPINION

We have carefully considered the subject matter on appeal, the rejections advanced by the examiner and the evidence of obviousness relied upon by the examiner as support for the rejections. We have, likewise, reviewed and taken into consideration, in reaching our decision, the appellant's arguments set forth in the briefs along with the examiner's rationale in support of the rejections and arguments in rebuttal set forth in the examiner's answer.

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would have suggested to one of ordinary skill in the art the obviousness of the invention as set forth in claims 1-18. Accordingly, we affirm.

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual

determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). If that burden is met, the burden then shifts to the applicant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. See Id.; In re Hedges, 783 F.2d 1038, 1039, 228 USPQ 685, 686 (Fed. Cir. 1986); In re Piasecki, 745 F.2d 1468, 1472,

223 USPQ 785, 788 (Fed. Cir. 1984); and In re Rinehart, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976). Only those arguments actually made by appellant have been considered in this decision. Arguments which appellant could have made but chose not to make in the brief have not been considered and are deemed to be waived [see 37 CFR § 41.37(c)(1)(vii)(2004)].

We consider first the rejection of claims 1-7 and 11-18 based on the teachings of Holmquest and Tran. Appellant has indicated that claims 1-7 and 11-16 stand or fall together as a first group, and claims 17 and 18 stand or fall together as a second group [brief, page 4]. Accordingly, we will limit our consideration to independent claims 1 and 17.

With respect to representative independent claim 1, the examiner essentially finds that Holmquest teaches the claimed invention. The examiner notes that even though the delay circuit of Holmquest can act at the time of power-up, it is not explicitly disclosed within Holmquest. The examiner cites Tran as teaching the use of a delay circuit at power-up in order to avoid false shutdowns. The examiner finds that it would have been obvious to the artisan to use the delay circuit taught by Tran in the Holmquest device for the advantages taught by Tran [answer, page 4].

Appellant argues that the delay disclosed in Holmquest is a post-detection delay whereas the claimed invention recites a delay occurring prior to the sensing circuits being operational. Appellant also argues that the delay in Holmquest reduces false trips of the relay related to minor fluctuations whereas the claimed invention does not delay the operation of a relay, but instead, delays operation of the sensing circuits each time the supervisory circuit is powered on. Appellant argues that Tran also fails to disclose a delay circuit as claimed. Appellant notes that the delay in Tran is for the DC power supply and not a delay for the sensing circuits as claimed. Finally, appellant argues that one of skill in this art would not be motivated to combine the Holmquest teachings with the teachings of Tran because none of the prior art can distinguish between phases or delay sensing circuits [brief, pages 5-9].

The examiner responds that Holmquest discloses a delay at every triggering event including the power-up process. The examiner also responds that Holmquest and Tran delay operation of the sensing circuits in the same manner disclosed by appellant, which is by delaying the acceptance of the output signals. The examiner notes that the delay in the disclosed invention is a post-detection delay in the same manner as taught by Holmquest

and Tran. The examiner also responds that the motivation to combine the Tran delay circuit with the Holmquest supervisory circuit is to prevent false shut downs as taught by Tran [answer, pages 10-16].

Appellant responds that Holmquest does not delay the output of the sensing circuits as in the claimed invention. Specifically, appellant asserts that the sensing circuits are not being delayed, but instead, the closing of the relay is being delayed. Appellant responds that the claimed activation circuit requires signals from both the sensing and delay circuits which is argued not to be taught by Tran. Appellant argues that Holmquest and Tran cannot be combined because Holmquest is used in a high voltage setting whereas Tran is used in a low voltage environment [reply brief, pages 3-7].

We will sustain the examiner's rejection of representative claim 1. We agree with the examiner that Holmquest teaches a delay circuit which performs in the same manner as the disclosed invention. Although claim 1 recites that the delay circuit delays initial operation of said sensing circuits for a predetermined period of time, that is not the function of the delay circuit as described in the specification.

Specifically, the operation of sensing circuits 104 in the disclosed invention is not delayed in the manner claimed. Each of sensing circuits 104 is initially operative to apply a signal to activation circuit 108. It is the gating of these signals by delay circuit 106 which implements the delay. Thus, it is the recognition of the sensing signals which is delayed, not the operation of the sensing circuits as claimed. The operation of the time delay in Holmquest acts to delay the recognition of the signals from sensors 12, 13 and 14. We find that this operation of Holmquest meets the claimed delay circuit to the same extent that appellant's disclosed delay circuit supports the claimed invention. Thus, the delay in Holmquest is a post-detection delay to the same extent that the delay in appellant's disclosed invention is a post-detection delay.

Appellant's argument that none of the prior art can distinguish between phases is incorrect. As noted by the examiner, Holmquest clearly teaches three separate sensors 12-14 which are each operable to detect errors associated with a different one of the three phases of the power supply. Therefore, Holmquest clearly distinguishes between the three phases of the power supply.

With respect to appellant's argument that the claimed



activation circuit must receive the sensed signals and the delay signal, we agree with the examiner that Holmquest teaches this feature. The activation circuit of Holmquest can be considered to be transistor 107 which is the driving transistor for the relay switch 23 [column 4, lines 15-16]. Driving transistor 107 receives signals from sensors 12-14 on common error bus 21. Error voltages indicated on line 21 are subject to a preset delay [column 4, lines 7-15]. Thus, the driving transistor 107 of Holmquest receives signals from the sensing circuits as well as a preset time delay signal. We find that this operation meets the recitations of claim 1.

Although the delay and activation circuits of Holmquest operate when the supervisory circuit of Holmquest is turned on, we also agree with the examiner that Tran teaches the advantages of checking for errors each time a circuit is turned on. We are not persuaded by appellant's argument that there is no motivation for combining the teachings of Holmquest and Tran. Tran simply confirms the fact that power supply voltages are likely to be unreliable for a short period of time following a power-up condition. We agree with the examiner that it would have been

obvious to the artisan to delay voltage sensing circuits as taught by Holmquest during power-up conditions for reasons taught by Tran.

With respect to separately argued claim 17, in addition to the arguments we considered above, appellant argues that Holmquest does not teach sensing circuits being operable to detect the various fault conditions recited in claim 17. Appellant argues that Holmquest discloses only a single phase sensor, but as noted above, Holmquest clearly discloses three phase sensors 12-14 [brief, pages 8-9]. The examiner responds that Holmquest discloses a voltage sensor for each phase. The examiner notes that an opening of any phase in Holmquest will result in an undervoltage condition detectable by the Holmquest circuit [answer, page 13]. Appellant responds that Holmquest can only detect a problem with one of the three phases and cannot distinguish problems between the phases [reply brief, pages 6-7].

We will sustain the examiner's rejection of representative claim 17 for essentially the reasons argued by the examiner in the answer. Claim 17 does not require that the circuit be capable of detecting problems between phases. Claim 17 only recites that the fault condition is selected from a group of possible fault conditions. The examiner is correct that open

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phases in Holmquest would be detected as under voltage conditions. This detection within Holmquest is sufficient to meet the recitation of claim 17.

We now consider the rejection of claims 8-10 based on Holmquest, Tran and Earle. We have considered the examiner's rejection, and find that the examiner has established a prima facie case for the obviousness of the claimed invention. Appellant has not specifically argued the limitations of these claims for patentability. In fact, appellant's brief indicates that these claims stand or fall with claim 1. Since the examiner has established a prima facie case of obviousness, and since appellant has made no arguments in rebuttal, we sustain the examiner's rejection of claims 8-10.

In summary, we have sustained each of the examiner's rejections of the claims on appeal. Therefore, the decision of the examiner rejecting claims 1-18 is affirmed.



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